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Factors Affecting the Equality and Diversity of Ethnic Minority Women in the UK Construction Industry: An Empirical Study

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Abstract

The construction industry has been notoriously known for being a male dominated industry with no room for change. As years have passed by, the industry has sparked a revolution of an increase of women joining the ranks. However, the industry is still known for its inequality and lack of diversity. The aim of this research was to investigate equality amongst ethnic minorities (EM's) in the construction industry, in particular female EM's, and establish the root causes of the lack of diversity. The sample of respondents consisted of construction professionals from all levels, comprising of 15 UK companies ranging from public to private sector firms, large, medium, and small companies. The findings showed 15 challenges and barriers faced by EM women in the UK. The main challenges were personal perceptions of negative treatment but a positive view on the collective of EM's women, EM's still believe that they are not treated equally in comparison to their white colleagues, the ingrained stigma of construction still being considered as a 'man's world' and cultural pressure and opposition from families that still exists in ethnic communities. It was also found that EM's have differing views on treatment and perceptions of the industry. Nevertheless, it was found that the construction industry has made changes. However, it needs to continually improve in order to open up the way for a more diverse workforce that is inclusive and fair for women from all walks of life.

Keywords: construction industry, cultural pressure, diversity, ethnic minorities, and women.

1. Introduction

The construction industry has faced several years of difficulty. An increase in projects has resulted in a demand for more qualified construction professionals, thus resulting in the infamous "skills shortage" that is having a detrimental impact on the construction industry (Gee, 2016). This skills shortage has resulted from factors such as retention, recruitment or just a general lack of knowledge of the industry at school level. However, according to the statistics obtained by UCAS there was a 3% rise in the number of UK students entering higher education in 2015 (UCAS, 2015). There is evidence that people are entering into higher education. More specifically there was a total of 12,910 undergraduate students in total that entered into a degree based in architecture and building and planning; with more female students than male (HESA,2016).

These numbers show that there is an interest in construction and yet there is still a shortage of qualified professionals. Evidently then, there are underlying problems affecting the industry but what are these underlying problems? Could the problem be a lack of interest from women or even women from EM's? The aim of the research was to investigate equality amongst EM's in the UK construction industry. In particular, examine the barriers to entry for

EM's, in particular EM women, into the construction industry by reviewing existing literature and analysing the causes of those barriers and identifying the root causes. This paper has then examined the viewpoints of female construction professionals through questionnaires and has drawn conclusions from that data. Based on the findings of this data, it has determined whether there are any challenges of inequality and how the Built Environment can begin to mitigate these barriers or whether the Built Environment is doing enough in regards to equality and diversity and if these barriers are just isolated instances.

2. Literature Review Findings

This literature review critically analysed established research of the barriers, root causes, available initiatives and drivers. Overall, 14 barriers were found for EM's. The literature review found 6 initiatives and 4 drivers for women and EM women in the Built Environment.

Across the world women face challenges and barriers into the world of construction. According to Gurjao (2014) India has more professionally qualified women in STEM subjects than the USA. This is remarkable in India which is culturally geared towards the favour of men and treating women as second class citizens. For centuries 'sex-selective abortion' has run rampant in India causing many female fetuses to be aborted because of their gender (Abrejo *et al.*2009). In a stark comparison the USA is well known for the 'American Dream,' the land of equal opportunity (Rank *et al.*2014) This dream offered immigrants a chance to build a prosperous life which would not normally be available to them in their country of origin. With that in mind, the assumption would be that the USA would have opened the way to EM's and yet India was leading the way for professionally qualified women. However, the researched examined other countries across the world and found different results. Women in the UAE experienced the barrier through cultural obligations. Omair (2010) found that the obligation for an Emirati woman is to look after the interests of her family and leave the career to the man of the house. Emirati women also have added religious connotations. However, even with the cultural and religious factors, women are able to attain higher roles through the government's Nationalisation programmes. Sadly, this came at a price. A woman would be expected to accept a lower salary to do the same job as a man if he was offered the job. Even though the government was actively encouraging companies to employ women, women still experienced those "glass ceiling" restrictions.

In Australia an investigation into cultural diversity on construction sites found that site managers do not accommodate for EM workers and even subconsciously encourage cultural divides (Loosemore *et al.*2010). They found that those workers who could not speak English proficiently or speak English as a second language were automatically mistreated in comparison to those that spoke English as their native tongue. The language barrier created an "us and them" attitude with those from similar ethnicities gravitating towards each other, rather than integrating with others on site. In comparison, the situation in Hong Kong was very similar to Australia. The majority of the workers on construction sites are from South Asian countries and they experience the same mistreatment and harassment. Wong and Lin (2014) stated that workers were paid less and were not entitled to the same benefits in comparison to the local Chinese workers. They also found that the majority of site based comments identified racial discrimination and bullying which ranged from name calling, racial graffiti, ignorance and social isolation. Ethnic isolation amongst minority groups was a key theme arising from experiences on site i.e. refusing to speak English to those who could not converse in Cantonese. The patterns emerging through these few international studies identified that minorities stuck together and the locals, regardless of their background, discriminated against other minority groups. It was almost ironic how EM's bullied other minority groups. The supposition would be that EM's would coalesce. However, the international research revealed that discrimination exists among any cultural group. So it was not obvious racism such as white and black. Rather, it was an ingrained inclination of "there are more of us than there is of them" which reiterated this "us and them" attitude.

In terms of treatment across the UK, the main factors that affected EM women in construction throughout recent years posed certain similarities to those found internationally. However, there were subtle differences. Loosemore and Higgon (2016) explored the reputation of the construction industry and found that "deep-seated cultural barriers" and an "ingrained stigma" prevented the industry from growing and collaborating with the social enterprise sector. The reputation of the industry appeared to be one reason as to why EM women avoided pursuing a career in the Built Environment. Another issue was the 'leaky pipeline' which is a metaphor used to describe how women 'leak' from STEMM subjects (Science technology, engineering, maths and medicine) at different stages (Resmini,2016). The research suggested that the industry lost women for reasons such as discrimination, unfair treatment and raising a family. Those women started at degree level but rarely made it through to completion due to those reasons. This was supported by the evidence contained in the 'Paula Principle' produced by Professor Tom Schuller. He wrote about the 5 main factors that affect a woman's career progression with one factor being

psychology (Revesz,2017). Brumfiel (2015) also found that psychology was a main factor as to why women leave the Built Environment. Occasionally, a woman's personal perceptions of her own ability to succeed in these fields prevent her from attaining a career in construction. A woman's lack of confidence can stifle her when making bolder career choices thus adding to the theory that a woman can literally be her own worst enemy. Another issue was the existence of the 'old boys club' stifling diversity in the industry. There was a lack of support for BME SME's to get onto any Approved Contractor's Lists. These lists predominantly contain "the more known and larger mainstream companies... 'favoured' contractors who are more likely to be white"(Steele and Todd,2005, pp.1018-1019). In order to alleviate this barrier, an EM individual or contractor would be expected to abandon their cultural heritage in order to fit in (Caplan and Gilham,2005). EM professionals were not encouraged to grow in their strengths or on merit. Rather, there appeared to be a process of breaking EM individuals down and rebuilding them so that they fit into this 'white' mould. It appeared difficult for EM females to fit in with the 'white laddish culture.' A woman may not avidly involve herself in the 'laddish' banter and jokes so she could be seen as a social outcast or even racially 'sensitive' in the workplace. This leads to EM women being excluded from other generic workplace activities and eventually leaving the Built Environment accepting field or profession. Byrne *et al* (2005,p.1032) also found evidence to suggest that EM's believed that they did not 'fit in' on site and were at a disadvantage before they even started work. They felt that the colour of their skin played a major part in how they are treated on site. This created an even bigger issue for EM women who face the potential of both gender bias and racial discrimination. Another barrier faced by EM women was in regards to their cultural obligations. Ceci *et al*.(2011) found that EM women who place having and raising children as a high priority are less likely to apply and hold higher ranking positions. However, women who did not possess this desire were noted as applying for just as many higher ranking positions as men. EM women believed that they could not have it all and they had to choose between having children and having a career. In conjunction with this, Chang (2006) identified that historically in EM communities, having children is seen as a cultural obligation. Due to the socio-cultural pressures, EM women felt pressured to leave their careers to have children. The consequence of this is the industry cannot retain the women it employed, thus losing skilled and qualified professionals.

The pattern emerging from the research, both nationally and internationally, was that the construction industry struggles to retain women from all backgrounds, particularly EM women. So not only was recruitment an issue, retention seemed to be a bigger problem. This referred back to the theory behind the 'leaky pipeline.' Although, the industry would like to think that there were no 'leaks,' the research showed that it was still an on-going issue. The factors that affected women were not only personal. There were also external pressures such as raising a family, cultural stigmas and overall treatment experienced by EM women both in employment and education. So the problems appeared to vary from country to country but seemed to be the same in the construction industry. EM's facing both cultural and site specific challenges and barriers whilst trying to maintain a successful career in the Built Environment.

The researcher explored the facilitators for EM's in the construction industry and found that there are numerous initiatives in place to help and support EM women. The researcher stated the success of the Athena SWAN Charter, the WISE Campaign as well as the other campaigns and events which are specifically aimed at EM women. One initiative which stood out was the 30% club. This was created to diversify board members in the financial sector. Now, a quarter of the FTSE 100 board members are female. This initiative must be tailored so that the Built Environment can benefit from a similar drive to recruit women into senior positions in construction companies.

The purpose of this research was to investigate the perceptions of EM women, the unseen barriers and struggles faced by EM women in their careers. The results of the research shone a deeper light on ways and methods that could be used to alleviate these barriers. However, in order to establish whether the bias still existed, the researcher looked to define whether the Built Environment in the UK had actively tried to improve recruitment and retention since the research in the literature review was conducted. Henceforth, the data collected from the questionnaires began to provide further insight into the current climate of diversity in the Built Environment in the UK. It also revealed certain patterns and stigmas that still exist in the industry.

3. Methodology

The researcher used a quantitative method in order to analyse both the raw data and the additional comments provided by the respondents. This was to ensure that factual data was analysed alongside participant's perceived viewpoints; in order to provide supportive evidence in the form of real life experiences. The questionnaires were constructed using closed ended questions with a rating scale which enables respondents to answer quickly and honestly (Farrell,2011). The questionnaires also contained 4 open-ended questions which allowed for the expansion of factual data on two questions and provided the respondent the opportunity to submit additional comments.

The sample of respondents were formed using stratified sampling (Crouch and Housden,2003). The sample consisted of construction professionals from all levels, comprised of 15 companies ranging from public to private sector firms, SME's and large corporate companies. In order to collect the primary data, the respondents were refined to a specific group. In this case the strata was female respondents. The researcher emailed the questionnaires to companies.

The questionnaire was created over a period of 2 weeks using findings from the literature review. Questions were structured to test and develop those findings. The researcher then distributed the questionnaires over a period of 1 week to the various companies. The researcher allowed 4 weeks for questionnaires to be completed and returned. Then the researcher began to code the responses and analyse the findings. The response timeframe was restricted to 4 weeks due to time constraints. If the researcher had more time, more questionnaires would have been distributed and a longer capacity of time would have been allowed. This would have broadened the pool of respondents but for the purpose of this research, only 20 questionnaires were analysed **(See Table 1).**

The data from the questionnaires has been analysed using a descriptive analysis. Farrell (2011) refers to a descriptive analysis as exploring perceptions towards a specific subject. This is done using the mode, mean, median and standard deviation. The data was divided into various sections which included graphs which highlighted patterns and comparisons across different ethnicities. Naoum (2013) refers to this as an analytical approach and the researcher found that certain patterns did emerge. There were also linked questions contained within the questionnaire. This enabled the researcher to interpret data in a more concise way by comparing the linked questions and the relationship in the responses.

Table 1 Respondents Details.

Main Details	Results
Gender	**20** Female respondents
Age	Average age: 36
Ethnic Background	White/British etc. = **14** Asian/Asian British = **2** White & Black Caribbean = **2** Black/Black British Caribbean = **1** Other (African Indian) = **1**
Construction Discipline	Quantity Surveyor = **8** Construction Manager = **2** Project Manager = **2** Health & Safety = **2** Site Manager = **1** Other = **6**
Education	Degree = **10** HND/HNC = **6** A levels = **2** NVQ = **1** Other = **1** Post Graduate = **1**
Experience in Years	Mean Experience = **10 years' experience**

4. Findings

As discussed in the literature review, the table below discusses how the respondents replied to the challenges.

Table 2 Respondents overall views.

Challenge	Respondents	Percentage
Negative Reputation of the Construction Industry: "laddish culture"	**17/20** said their experiences in construction were positive **3/20** were unsure	**85%** **15%**
Leaky Pipeline: Leaving the industry	**18/20** said they have not intentions of leaving the industry **2/20** were not sure whether to leave	**90%** **10%**
Personal Perception	**15/20** felt they had an equal opportunity for career progression **4/20** felt they did not **1/20** were unsure	**75%** **20%** **5%**
Fitting in on site	**15/20** felt valued in their current role **3/20** were unsure **1/20** disagreed	**75%** **15%** **10%**
Abandoning their Cultural Heritage	**15/20** agreed that EM women are treated the same as White/British women **3/10** were unsure **2/10** disagreed	**75%** **15%** **10%**
Workplace Discrimination	**10/20** said men and women are treated equally in the workplace **6/20** disagreed **4/20** were unsure	**50%** **30%** **20%**
Cultural Obligations	**16/20** did not feel that their ethnicity prevents them from achieving their goals in the Built Environment **3/20** were unsure **1/20** disagreed	**80%** **15%** **5%**
Community Pressures	**17/20** have not experienced negativity from their families due to the nature of their job role **2/20** have experienced negativity **1/20** was unsure	**85%** **10%** **5%**

Below are the additional highlights from the findings:

- Personal perceptions of negative treatment but a positive view on the collective of EM women which was found amongst all 6 EM respondents
- 83% of the EM respondents still believe that they are not treated equally in comparison to their white colleagues
- 17% of EM women were affected by the existence of cultural pressure and opposition from their families
- Gender bias: an ingrained stigma of construction still being considered as a 'man's world.' 50% of EM respondents agreed with this compared to 79% of White/White British Women that agreed with the gender bias
- Equal pay between men and women: 100% of EM respondents disagreed that men and women are paid equally compared to 50% of White/White British women who also disagreed, 43% that did not know if there was a pay gap and only 7% that agreed pay is equal between men and women in the built environment.

The main findings from the EM respondents were extremely insightful and shed further light onto the culture of the Built Environment in the UK. The main findings were the perception of the industry still being considered a male dominated environment with ingrained stigmas and deep seated barriers. However, as more women enter the industry this is starting to tip the balance of construction being a more acceptable career for women. It was also found that

EM's do not face as much opposition from families and communities although this still exists among some ethnicities. EM women still believe that they are not treated in equal terms with white women regardless of their professional qualifications or workplace position. A major finding was that there was a pattern of EM women answering positively to questions regarding the collective but answering negatively to questions which related to personal experience; thus indicating that personal perception is still proving an issue for EM's. It was also found that it was only the Asian/Asian British women that believed that native workers discriminate against the minority on site. The other minorities did not believe this to be the case. However, as the data showed, it was possible that this question was not properly understood; so this would need further investigating to establish whether this is still the case. One of the most interesting points that came from the research was the difference between EM groups. The Asian/Asian British respondents had a different outlook to the other EM groups. The overall data showed that women that came from EM's such as Black British or Mixed heritage backgrounds generally had more positive responses and agreed that construction has come a long way. The only 2 Asian/Asian British respondents had a very different outlook. This may imply that Asian/Asian British women experience more discrimination or negative treatment than Black British women.

The findings showed that although there are initiatives to get women and EM women into construction, there needs to be a bigger drive. This needs to be done at school level to educate young women into the 'real side' of construction. Education on career choices available to women in the industry needs to be improved and more widely available to a larger audience. It is possible for companies to offer work experience for students so that they can see what it means to work on site and in the various roles that the construction industry has to offer. The industry is at the risk of losing valuable knowledge and expertise unless it is transferred to the younger generation. A method of transferring this experience is to get employers to introduce more sponsorships, so that a company can transfer this experience by assigning an experienced construction professional to each apprentice or trainee. This a joint opportunity to balance the difference in technical expertise and enable women to be as valued as their male colleagues. Employers and educational institutes can join forces to develop the next generation of construction professionals and bridge the knowledge and experience gap experienced by women. This is an ideal opportunity to raise awareness for EM women on developing in construction relates careers thus aiding in the diversification of the industry.

5. Discussion

The responses from EM women indicated that there were still barriers for them in construction and the workplace. The similarities in EM comments were that if you worked harder and prove you belonged, you can have a successful career in the industry. It is possible but it requires a strong character to achieve these goals. EM's still face opposition from their families and communities but do not face as much pressure as they once did. This shows that there has been an improvement in the support from families. Asian/Asian British women believe that native workers discriminate against the minority on site.

Most of the White/British etc. respondents had not had a lot of experience working with EM women in the industry showing that there is a shortage of EM women in construction and the ones that are currently active in the industry had mixed views in regards to treatment.

EM women are still holding themselves back due to their own personal perceptions of success. The implications of this are that EM women cannot move forward unless they focus on improving their own outlook on their careers and treatment in the Built Environment.

6. Conclusions

The results revealed that there have been positive changes and that more EM women are venturing into the construction industry as a career choice. However, the results also reveal that it is not quite perfect yet. There is still room for improvement and there are stigmas and prejudices that still exist. For example, for EM's the main finding was that they answered positively regarding other EM's as a collective. However, when it came to personal experiences EM's answered negatively. It seemed as though EM's personal perceptions of their treatment was negative but they view other EM's as succeeding more in their careers. Another example was that EM's with professional roles and qualifications still believe that

they are at a disadvantage compared to white women. The other finding was that although EM's do not experience the same level of cultural resistance, it still exists in some communities. Some EM's still experience opposition from their families. In comparison, white women do not experience the same level of culturally driven challenges.

The research showed that the stigma of construction being a 'man's world' still exists in the present day. There are initiatives which are in place to support women in construction in education and in the workplace. However, the main finding from the initiatives is that the Built Environment is lacking women in senior and board roles. The implementation of a tailored 30% club for the construction industry is a must if the Built Environment is to drive diversity across all levels. Women across the board are still fighting for their belonging in the industry. Some experiences show that their companies are more acceptable of them whereas others have had bad experiences with their colleagues or companies as a result of attitudes or out dated company policies. Avenues for further research included the potential for additional interviews with more EM women across the board to delve deeper into their perceptions of the industry. It would also provide a way of distinguishing the differences between EM's such as between Asian/Asian British, Black/Black British and Mixed Heritage women. In order to explore these areas, interviews would provide in depth experiences and the reasons behind these responses rather than speculating on the current data.

In summary, it is the responsibility of the construction industry to improve its working practices in order to develop and grow into a more acceptable industry. The onus also falls on EM women to work on improving their own perceptions of the value of their own careers and their belonging in the Built Environment. The potential of changing the outlook and working practices of the industry will begin to change the dynamics of the industry and create more inclusive working practices.

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This proceedings contains 68 papers submitted by researchers from 20 countries around the globe into the International Conference on Sustainable Futures (ICSF). The conference was held under the Patronage of HE Dr. Majid bin Ali Al Nuaimi, the Minister of Education in the Kingdom of Bahrain, and organised by Applied Science University in collaboration with London South Bank University (LSBU), UK. This conference, which centered on the three sustainability pillars: Technology, Environment and Economics, taking into account future studies and changes within the global context, has contributed to the implementation of the Vision 2030 of the Kingdom of Bahrain. The ICSF served as an international and inter-disciplinary platform where academics and industry had the opportunity to explore emerging trends and address obstacles affecting sustainable futures in addition to recommending potential solutions.

The Editors

Professor Ghassan Aouad is the President of Applied Science University in Bahrain and Past President of the Chartered Institute of Building. During his research career which spans over 25 years, he successfully supervised 24 PhD students, externally examined 52 PhD students, authored 3 major research books and co-authored one book, generated more than £10M in research funding as Principal Investigator and £8M as Co-Investigator, published 92 papers in top rated refereed journals, delivered more than 50 keynote speeches and invited lectures, and presented his work in more than 42 countries. In July 2016, Professor Aouad received an Honorary Doctorate of Technology from Loughborough University in the UK.

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